

# A Fluoropolymer Composite with High Ionic Conductivity

## Abstract

5 A fluoropolymer composite with high ionic conductivity that may be applied in electroactive polymer composite includes following components: PVDF-g-SPS; PVDF; and hydrocarbon- or fluoro-elastomer. After being mixed with specific proportion and being dissolved in an oily or non-oily solvent of non-proton or proton of high boiling point, the invention is coated  
10 on a substrate and is heated to get rid of the solvent afterwards to get a compound membrane. Then, a compound membrane of PVDF-g-SPS may be obtained by sulphonating the aforementioned compound membrane. The obtained compound membrane has excellent properties, such as thermal stability, acid-alkali resistance, good mechanical performance, excellent  
15 flexibility, and capability for processing appropriate cross-link for further enhancing the mechanical performance of this membrane.